

WHAT IS CLAIMED IS:

1. A method of inhibiting the growth of refractory tumors that are stimulated by a ligand of epidermal growth factor receptor (EGFR) in human patients, comprising treating the human patients with an effective amount of an EGFR/HER1 antagonist.

2. A method according to claim 1 wherein the antagonist is a monoclonal antibody specific for EGFR/HER1 or a fragment that comprises the hypervariable region thereof.

3. A method according to claim 2 wherein the monoclonal antibody is chimerized or humanized.

4. A method according to claim 1 wherein the antagonist is a small molecule that binds specifically with EGFR/HER1.

5. A method according to claim 4 wherein the small molecule inhibits EGFR/HER1 phosphorylation.

6. A method according to claim 2 wherein the monoclonal antibody inhibits EGFR/HER1 phosphorylation.

7. A method according to claim 1 wherein the refractory tumor has been treated with radiation or chemotherapy and combinations thereof.

8. A method according to claim 1 wherein the tumors are tumors of the breast, heart, lung, small intestine, colon, spleen, kidney, bladder, head and neck, ovary, prostate, brain, pancreas, skin, bone, bone marrow, blood, thymus, uterus, testicles, cervix, and liver.

9. A method according to claim 1 wherein the tumors are squamous cell carcinomas.

10. A method of inhibiting the growth of refractory tumors that are stimulated by a ligand of epidermal growth factor receptor (EGFR) in human patients, comprising treating the human patients with an effective amount of a combination of EGFR/HER1 antagonist and radiation.

11. A method according to claim 10 wherein the antagonist is administered before radiation.

12. A method according to claim 10 wherein the antagonist is administered during radiation.

13. A method according to claim 10 wherein the antagonist is administered after the radiation.

14. A method according to claim 10 wherein the antagonist is administered before and during radiation.

15. A method according to claim 10 wherein the antagonist is administered during and after radiation.

16. A method according to claim 10 wherein the antagonist is administered before and after radiation.

17. A method according to claim 10 wherein the antagonist is administered before, during, and after radiation.

18. A method according to claim 10 wherein the source of the radiation is external to the human patient.

19. A method according to claim 10 wherein the source of radiation is internal to the human patient.

20. A method according to claim 10 wherein the antagonist is a monoclonal antibody.

21. A method according to claim 10 wherein the tumors are tumors of the breast, heart, lung, small intestine, colon, spleen, kidney, bladder, head and neck, ovary, prostate, brain, pancreas, skin, bone, bone marrow, blood, thymus, uterus, testicles, cervix, and liver.

22. A method of inhibiting the growth of refractory tumors that are stimulated by a ligand of epidermal growth factor receptor (EGFR) in human patients, comprising treating the human patients with an effective amount of an EGFR/HER1 antagonist and a chemotherapeutic agent.

23. A method according to claim 22 wherein the antagonist is administered before treatment with the chemotherapeutic agent.

24. A method according to claim 22 wherein the antagonist is administered during treatment with the chemotherapeutic agent.

25. A method according to claim 22 wherein the antagonist is administered after the treatment with the chemotherapeutic agent.

26. A method according to claim 22 wherein the antagonist is administered before treatment with the chemotherapeutic agent.

27. A method according to claim 22 wherein the antagonist is administered during and after treatment with the chemotherapeutic agent.

28. A method according to claim 22 wherein the antagonist is administered before and after treatment with the chemotherapeutic agent.

29. A method according to claim 22 wherein the antagonist is administered before, during, and after treatment with the chemotherapeutic agent.

30. A method according to claim 22 wherein the chemotherapeutic agent is selected from the group consisting of amifostine, cisplatin, dacarbazine, dactinomycin, mechlorethamine, streptozocin, cyclophosphamide, carmustine, lomustine, doxorubicin, doxorubicin lipo, gemcitabine, daunorubicin, procarbazine, mitomycin, cytarabine, etoposide, methotrexate, 5-fluorouracil, vinblastine, vincristine, bleomycin, paclitaxel, docetaxel, aldesleukin, asparaginase, busulfan, carboplatin, cladribine, camptothecin, CPT-11, 10-hydroxy-7-ethyl-camptothecin (SN38), dacarbazine, floxuridine, fludarabine, hydroxyurea, ifosfamide, idarubicin, mesna, interferon alpha, interferon beta, irinotecan, mitoxantrone, topotecan, leuprolide, megestrol, melphalan, mercaptopurine, plicamycin, mitotane, pegaspargase, pentostatin, pipobroman, plicamycin, streptozocin, tamoxifen, teniposide, testolactone, thioguanine, thiotepa, uracil mustard, vinorelbine, chlorambucil and combinations thereof.

31. A method according to claim 22 wherein the chemotherapeutic agent is selected from the group consisting of cisplatin, doxorubicin, paclitaxel, CPT-11, topotecan and combinations thereof.

32. A method according to claim 22 wherein the tumors are tumors of the breast, heart, lung, small intestine, colon, spleen, kidney, bladder, head and neck, ovary, prostate, brain, pancreas, skin, bone, bone marrow, blood, thymus, uterus, testicles, cervix, and liver.

33. A method according to claim 22 wherein the antagonist is a monoclonal antibody.